

## WHAT IS CLAIMED IS:

1. A method for debugging in an application program, the method comprising:  
writing information on a task to be performed;  
checking whether the task is performed in a designated region; and  
generating an interrupt signal when the task is performed in a region other than the designated region for the task.
2. The method according to claim 1, wherein the information on the task is a task identifier.
3. The method according to claim 2, further comprising:  
latching a data signal corresponding to the written information on the task;  
and  
outputting a task signal corresponding to the task identifier that is identified based on the latched data signal.
4. The method according to claim 3, wherein the designated region is an operation region assigned to each task.

5. The method according to claim 1, further comprising:  
determining the information on the task responsive to the interrupt signal;  
and  
performing an operation corresponding to the information on the task based  
on the determination.

6. The method according to claim 5, further comprising sending a control  
signal that is generated based on the interrupt signal to a memory.

7. The method according to claim 1, wherein after a task switching occurs to  
a next task, a checking process based on information corresponding to the next task is  
repeatedly conducted to check whether the next task is performed in a corresponding  
designated region.

8. The method according to claim 1, wherein the checking whether the task  
is performed in a designated region further comprises:

checking an operation region of a current task being accessed and outputting  
a result;

generating an address signal corresponding to the checking result; and

outputting a grant signal based on the address signal.

9. The method according to claim 8, wherein a task signal is used for outputting the grant signal.

10. A method for debugging in an application program, the method comprising:

(a) outputting a task signal corresponding to a task identifier that is identified based on a data signal corresponding to the task identifier;

(b) checking an operation region of a task that is accessed based on an access of data;

(c) judging whether the task is performed in a designated region based on an address signal corresponding to a result of the checking; and

(d) generating an interrupt signal when the task is not performed in the designated region as a result of the judging.

11. The method according to claim 10, wherein when a task switching occurs, the steps (a) through (d) are repeatedly performed based on a next task identifier.

12. The method according to claim 10, wherein the task identifier is provided for each task to be performed, and wherein the task identifier is selectably stored for said each task.

13. The method according to claim 10, wherein the designated region is an operation region assigned to each task.

14. The method according to claim 10, wherein the task signal is used for generating the interrupt signal.

15. A apparatus for debugging in an application program, the apparatus comprising:

first control means for writing a task identifier provided for each task to be performed, for generating a data signal corresponding to the task identifier, and for activating a selected task;

task checking means for outputting a task signal corresponding to the task identifier that is identified based on the data signal, and for generating an interrupt signal according to a determination whether a current task is performed in a designated region; and

storage means for writing the task identifier provided by the first control means, and for assigning an operation region to each task.

16. The apparatus according to claim 15, further comprising second control means for outputting a control signal to control the storage means based on the generated interrupt signal.

17. The apparatus according to claim 15, wherein an address signal is used as a basis of determining whether the current task is performed in the designated region.

18. The apparatus according to claim 15 wherein the task checking means comprises:

a latching unit that latches the data signal;

a decoding unit that identifies the task identifier based on the latched data signal, and generates the task signal corresponding to the task identifier; and

a task comparing unit that receives the task signal and generates the interrupt signal according to the address signal.

19. The apparatus according to claim 18, wherein a plurality of task comparing units is included that are equal in number to tasks to be performed.